

ABSTRACT OF THE DISCLOSURE

A concentrated parity technique allows construction of an extended array that is tolerant of any one or two storage device failures and that enables storage of more than one parity block on a single storage device of the array. The concentrated parity technique uses a conventional, per stripe, distributed parity assignment of data blocks to parity sets, with a restriction that precludes certain parity deltas. Yet, this restriction enables construction of the extended array having data blocks stored on a first set of devices that is disjoint from a second set of devices storing parity blocks, to thereby enable storage of more than one parity block per stripe on a single device.